

ABSTRACT

A surface-coated cutting tool member includes a tungsten carbide based cemented carbide substrate, a titanium carbonitride based cermet substrate, or a cubic boron nitride based sintered substrate; and a hard coating layer of a nitride compound containing aluminum and titanium, formed on a surface of the substrate using a physical vapor deposition method in an overall average thickness of 1 to 15 μm . The hard coating layer has a component concentration profile in which maximum aluminum containing points and minimum aluminum containing points appear alternatingly and repeatedly at a distance from 0.01 to 0.1 μm in a direction of thickness of the hard coating layer. The amount of contained aluminum (or titanium) is changed from the maximum aluminum containing points to the minimum aluminum containing points. The maximum aluminum containing points satisfy a formula: $(\text{Al}_X\text{Ti}_{1-X})\text{N}$, wherein X is between 0.70 to 0.95. The minimum aluminum containing points satisfy a formula: $(\text{Al}_Y\text{Ti}_{1-Y})\text{N}$, wherein Y is between 0.40 to 0.65.